the greater depth at which the mines will have to be worked, and the increased cost of coal-mining. Reference was then made to the great expansion of coal-mining in America, and the author agreed with the late Professor Jevons that future British manufacturers must not expect to derive any help from the import of coal from the United States when coal shall have become dear or scarce at home.

A good discussion followed the reading of this paper. Mr. Bourne pointed out that the opening of the Canadian route to the East would ease the demand on English product, as coal had been discovered in the Dominion. Thus the Peninsular and Oriental ships, instead of filling with English coal at foreign stations, would probably be running from Vancouver to China and Japan, and use Canadian coal. The speaker looked to petroleum to lessen the demand for coal in many instances, as it had already done in many cases. He did not consider the electric light had done much in this direction, but, if water-power could be more largely used, some relief might be hoped for in that direction.

Mr. G. W. Hastings, M.P., spoke on the aspect of the question from the political economist's standpoint, and pointed out that coal-owners had been making very little profit from their exports.

Mr. John Marley, president of the Northern Institute of Mining and Mechanical Engineers (Darlington), said it would be well if Professor Hull had taken into consideration one or two facts in connection with the coal-trade. One was that thirty years ago the amount of coal required for the production of every ton of pig-iron and its detailed manufacture was double the quantity it is now. That would, therefore, form an element in future calculations. Also the manufacture of steel only required about half the number of tons of coal which was required for each ton of manufactured iron. Another point which the professor had named was his differing from the Royal Coal Commission in not taking into account the coal-seams between 12 inches and 24 inches in thickness. The professor evidently thought that these seams will not come into play so much as he (Mr. Marley) would venture to submit they will, on account of the great depth to which shafts will have to be sunk to work them. He would call Professor Hull's attention to the fact that these shafts have to be sunk, and are sunk, to the thicker seams; and when these thicker seams are exhausted, then the thin seams, between 1 foot and 2 feet in thickness, come into play. He spoke of what was an actual fact, for he knew many instances where seams of 14, 16, and 18 inches were at this moment being worked profitably in the county of Durham from shafts sunk from the thicker seams. Professor Hull would therefore see that his objection to the expensive shafts for these thin seams did not really apply.

Professor Hull, in reply, did not anticipate that petroleum, however largely it was likely to come into use in England, would make very much difference in the demand for coal. As to Mr. Marley's remarks on the greater economy of fuel in the manufacture of iron, he himself could remember when eight tons of coal were required in the Midlands for the production of one ton of iron, while now only 1¼ tons of coke were required in Cleveland per ton of pig-iron. At the same time, the economy in the use of coal was more than counterbalanced by the enormous increase in the production of iron.

HEALTH MATTERS.

Insanity following Surgical Operations.

IN a recent letter to the *British Medical Journal*, Dr. Tait writes, —

"I have now performed, so far as I can estimate, between seven thousand and eight thousand operations requiring the use of anæsthetics, and I have had anæsthetics administered in my practice for purposes not involving traumatism probably in three thousand more instances, and I know of seven cases of sequent — not necessarily consequent — insanity. Of course, there may have been others not known to me, and I shall say fourteen cases to cover that margin of error. My own practice, therefore, does not yield a proportion of cases of insanity following operations larger than the general proportion of insanity in the adult female population; and, if I include the cases of anæsthesia, it is probably considerably smaller.

"Dr. Denis, in his book on this subject, says, 'En moyenne, on observe 2.5 cas d'aliénation mentale sur 100 opérations.' But if this had been the case, all of us engaged in active operating practice would have felt the influence of the fact long ago. Personally I have been struck by the occurrence of insanity after operations as being like the occurrence of tetanus, — something to be met with occasionally, but not a matter to calculate upon. If I saw an insanity rate of 2.5 in my operations, it would be more striking than any death-rate in every thing but my hysterectomies, and in that class I have already said I have never seen insanity follow in a single instance; and Dr. Bantock's experience amounts to practically the same result, for his exception cannot really be called one of insanity following an operation. As a *per contra*, I can point to at least thirteen cases where operations have cured insanity."

TRANSPLANTATION OF SKIN FROM A CORPSE TO A LIVING PERSON. — Dr. Bartens has successfully transplanted the skin of a corpse to a living person who had been severely burned. His method of procedure, as described in the *Brooklyn Medical Journal*, was as follows: On Dec. 13 a lunatic died in the hospital of pyæmia following a compound fracture of the arm, and about twenty minutes after his death two large, good-conditioned flaps were removed from the legs of the corpse. These were laid in warm water to which a little salt had been added, and then were taken to the division of the hospital (two or three hundred yards away) in which the scalded boy lay. These flaps were then carefully washed, and cleansed of their subjacent fatty pannus; that done, they were divided into smaller pieces of from one centimetre wide to about one to two centimetres long (the ulcerated surfaces of the boy's legs had been cleansed in the same manner as the flaps in the mean time); then these pieces were laid on to fit as nearly as might be, dusted over with iodoform and covered with batting, and compresses applied. This whole proceeding took about one hour and a half from the time of the death of the old man. There were twenty-eight pieces applied in all; as it happened, too, fourteen on each limb. On the 19th of December the bandages were removed for the first time, and it was found that there was union of twenty-four of these grafts.

COCAINE HALLUCINATIONS. — MM. Magnan and Saury report three cases of hallucination due to the cocaine habit. According to the *British Medical Journal*, one patient was always scraping his tongue, and thought he was extracting from it little black worms; another made his skin raw in the endeavor to draw out cholera microbes; and a third, a physician, is perpetually looking for cocaine crystals under his skin. Two patients suffered from epileptic attacks, and a third from cramps. It is important to notice that two of these patients were persons who had resorted to cocaine in the hope of being able to cure themselves thereby of the morphine habit, — an expectation which had been disappointed. For more than a year they had daily injected from one to two grams of cocaine under the skin; without, however, giving up the morphine injections, which were only reduced in quantity. The possibility of substituting cocainism in the endeavor to cure morphinomania is a danger, therefore, which must be carefully held in view.

NOTES AND NEWS.

THE officers for the coming year of the Society for the Promotion of Agricultural Science are Professor C. E. Bessey of the University of Nebraska, for president; Professor W. R. Lazenby of Ohio University, for secretary and treasurer; and professor T. J. Burrill of Illinois University, for third member of the council.

— The thirty-third annual convention of the Association of College Presidents in New England began Nov. 7, in New Haven, Conn., at the residence of President Dwight. Delegates were present from eleven colleges, including President Eliot of Harvard, President Warren of the University of Boston, Professor Richardson of Dartmouth, President Smith of Trinity, President Carter of